

GSA's National 3D-4D-BIM Program



Building Information Modeling





PBS OCA 3D-4D-BIM Program

Office of the Chief Architect

Charles Matta, FAIA [charles.matta@gsa.gov]
Director
Center for Federal Buildings and Modernizations
Office of the Chief Architect

Regina Crews [regina.crews@gsa.gov]
Contracting Officer / Group Lead
Office of Capital Asset Management

Steve Cox [steven.cox@gsa.gov]
Contract Specialist
Office of Capital Asset Management

Calvin Kam, Ph.D. [calvin.kam@gsa.gov]
National 3D-4D-BIM Program Manager
Center for Federal Buildings and Modernizations
Office of the Chief Architect

30+ Regional BIM Champions

[<http://www.gsa.gov/bim>]

Priorities—The GSA BIM Guide Series

01—Overview

02—Spatial Program Validation

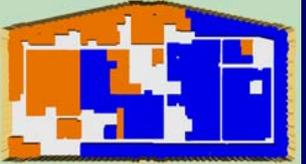
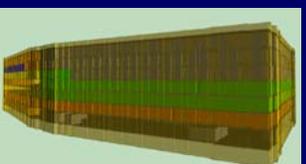
03—3D Imaging

04—4D Phasing

05—Energy Performance and Operation

06—Circulation and Security Validation

07—Building Elements

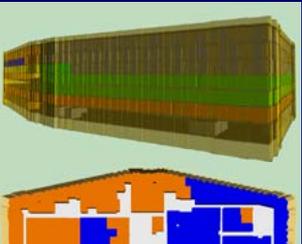
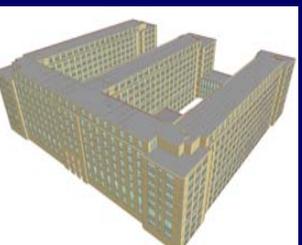


GSA's National 3D-4D-BIM Program

From introduction,
to pilots and technology/standard development,
to policy and budget and guidance,
to program and project deployment and supports

70+ Projects To Date

- 30+ projects led by Office of Chief Architect
- 40+ projects with Office of Chief Architect supports



*For all prospectus projects receiving design funding in **FY2007 and beyond**,*

*a **spatial program** Building Information Model will be the **minimum requirement** for all new and modernization projects*

*that will be submitted to Commissioner of the Public Buildings Service for **Final Concept approvals**.*

GSA's 3D Laser Scanning Initiative

3D Imaging/Laser Scanning

Region 2 26 Federal Plaza, NY
Brooklyn Post Office and Courthouse, NY

Region 4 Peachtree Summit Building, GA
Miami Judicial Campus, FL

Region 5 Dirksen Federal Building, IL

Region 9 300 NLA Federal Building, CA

Region 11 St. Elizabeth's Campus, DC



Ongoing 3D-4D-BIM Projects led by OCA:

Spatial Program Validation

Region 4 Tuttle Annex, GA

Region 5 Dirksen Federal Building, IL (and laser as well)

Region 6 Cedar Rapids Courthouse, IA

Region 10 Edith Green Federal Office, OR

R11/NCR 1800 F Street GSA Central Office, DC
HCHB Dept of Commerce, DC
St. Elizabeth's Campus, DC (candidate; led by NCR)



Ongoing 3D-4D-BIM Projects led by OCA:

Phasing

Region 2 Rodino Federal Office Building, NJ

Region 9 PJKK Federal Building, HI

Region 10 Edith Green Federal Building, OR

Region 11/NCR HCHB Dept of Commerce, DC

Energy Performance and Operation

Region 8 Salt Lake City Courthouse, UT

Region 5 Warroad Land Port of Entry, MN

Region 9 San Francisco Federal Office, CA



PBS National 3D-4D-BIM Program

Historic—Brooklyn GPO





3D Laser-Scan Documentation of Building Assets

New Bern Courthouse, Federal Office, Post Office

GSA Office of Chief Architect, GSA Region 4

Optira and AEC InfoSystems

New Bern U.S. Courthouse, Fed Bldg, Post Office



New Bern U.S. Courthouse, Fed Bldg, Post Office



Birch Bayh U.S. Courthouse, Indianapolis

GSA Office of Chief Architect, GSA Region 5

Mapcon and Intellisum

Birch Bayh U.S. Courthouse



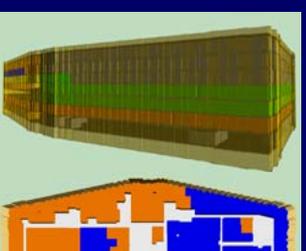
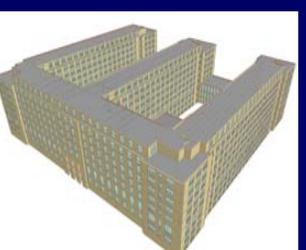
Birch Bayh U.S. Courthouse



GSA's One-Stop Center of Expertise

Office of Chief Architect—Resources for 3D, 4D, BIM

- Strategy, Policy, and Tactics
- Program and Pilot Funding
- Development, Implementation, Standardization
- Solicitation and Scope of Work
- Internal Knowledge Portal (SOW, metrics, case studies)
- Training Opportunities (high-level, software trials, and tutorials)
- Public Outreach
- International Collaboration—Finland, Norway, Denmark, Netherlands, Japan



GSA's National 3D-4D-BIM Program

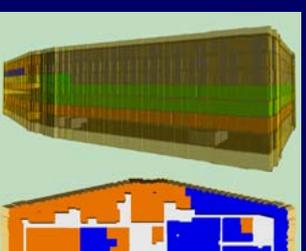
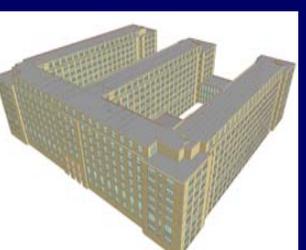
Transparency and Accountability

Awards

- AIA Technology in Architectural Practice 2007 Award
Jury's Choice
- FIATECH's Technology and Innovation Award
Large Scale Implementation
- International IAI/BuildingSMART Alliance
Innovation Award
- AIA TAP 2005 Award
Honorable Mention

Articles

Architectural Record, Engineering News-Record, Building Design and Construction, Federal Computer Week, SPAR Point,



- Design and Construction**
- Overview
- Architecture & Engineering
- CAD Standards
- 3D-4D Building Information Modeling**
- 3D-4D-BIM Overview
- Spatial Program Validation
- 3D Laser Scanning
- 4D Phasing
- Energy Performance and Operations
- Circulation Design Validation
- BIM Champions
- BIM Mailing List
- BIM Library
- Commissioning
- Construction Excellence
- Design Excellence and the Arts
- Facility Access for the Disabled
- Sustainable Design
- Urban Development
- Design and Construction Delivery Process

Home > Buildings > Public Buildings > Design and Construction > 3D-4D Building Information Modeling

3D-4D Building Information Modeling

Since 2003, the General Services Administration (GSA) through its Public Buildings Service (PBS) Office of Chief Architect (OCA) has established the National 3D-4D-BIM Program. OCA has completed over 10 pilot projects currently. It has over 15 projects underway in its capital program, while assessing and supporting 3D, 4D, Building Information Modeling (BIM) applications in over 35 ongoing projects across the nation. The power of visualization, coordination, simulation, and optimization from three-dimensional (3D), four-dimensional (4D), and BIM computer technologies allow GSA to more effectively meet customer, design, construction, and program requirements. GSA is committed to a strategic and incremental adoption of 3D, 4D, BIM technologies.

There is a progression from 2D to 3D, 4D and BIM. While 3D models make valuable contributions to communications, not all 3D models qualify as BIM models since a 3D geometric representation is only part of the BIM concept.

Critical to successful integration of computer models into project coordination, simulation, and optimization is the inclusion of information—the "I" in BIM—to generate feedback. As a shared knowledge resource, BIM can serve as a reliable basis for decision making and reduce the need for re-gathering or re-formatting information. GSA is currently exploring the use of BIM technology throughout a project's lifecycle in the following areas: spatial program validation, 4D phasing, laser scanning, energy and sustainability, and courts design validation.

For all major projects (prospectus-level) receiving design funding in Fiscal Year 2007 and beyond, GSA



CONTACTS

- Charles Matta**
(202) 219-2355
charles.matta@gsa.gov
View Contact Details
- Calvin Kam**
(202) 208-0447
calvin.kam@gsa.gov
View Contact Details
- National 3D-4D-BIM Program**
bim@gsa.gov
View Contact Details

GOVERNMENT LINKS

- GSA Mandates Building Information Modeling

NONGOVERNMENT LINKS

- AIA CBSP Symposium on BIM for Building Envelope Design and Performance
- Digital Modeling, Early Adopters Find the Best Models are Digital Virtuosos
- GSA Mandates on Building Information Modeling
- 3D Laser Scanning in GSA's 3D-4D-BIM Program
- Use of BIM by Facility Owners: An "Expositions" Meeting
- International Alliance for Interoperability (IAI)



PBS OCA 3D-4D-BIM Program

Office of the Chief Architect

Charles Matta, FAIA [charles.matta@gsa.gov]
Director
Center for Federal Buildings and Modernizations
Office of the Chief Architect

Regina Crews [regina.crews@gsa.gov]
Contracting Officer / Group Lead
Office of Capital Asset Management

Steve Cox [steven.cox@gsa.gov]
Contract Specialist
Office of Capital Asset Management

Calvin Kam, Ph.D. [calvin.kam@gsa.gov]
National 3D-4D-BIM Program Manager
Center for Federal Buildings and Modernizations
Office of the Chief Architect

30+ Regional BIM Champions

[<http://www.gsa.gov/bim>]